

1                   **METHOD AND CIRCUIT FOR ALLOWING A MICROPROCESSOR TO**  
2                   **CHANGE ITS OPERATING FREQUENCY ON-THE-FLY**

5                   **ABSTRACT OF THE DISCLOSURE**

7                   A circuit that permits a processor in a microcontroller to adjust its clock  
8                   speed on the fly. A processor receives a current clock signal and a phased current  
9                   clock signal from a speed selection switch. A new speed selection switch provides  
10                  a new clock signal and a phased new clock signal for comparison with the current  
11                  clock signals. When the states of the current and new clocks appropriately align  
12                  after issuance of a control signal from the processor, the new speed is switched  
13                  into the current speed switch to permit the clock speed to change without  
14                  producing spurious signals that can cause unpredictable action in the processor.  
15                  This advantageously allows the microcontroller to adjust its clock speed under  
16                  program control.